

Journal of Pharmaceutical Advanced Research**(An International Multidisciplinary Peer Review Open Access monthly Journal)**Available online at: www.jparonline.comR
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0**Coronavirus: A World Threaten infectious agent****Hiralal Prasad**

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ABSTRACT: A coronavirus is a RNA virus causing diseases in mammals and birds. Feline coronavirus (FCoV) is a positive-stranded RNA virus which infect to cats globally. This virus get enveloped with a spherical particles which is associated with a nucleoprotein within a capsid comprised of matrix protein. As per the report of WHO, the incubation period for 2019-nCoV between 2 and 10 days. The major symptoms of virus infections are runny nose, sore throat, cough, fever and difficulty breathing. The infection transmit from person to person through air by coughing, sneezing. The vaccination has not been started yet. As much as the individual shall be away from virus, the infection might be prevented. There is no specific antiviral treatment recommended for COVID-19. The current research over the world wide are extensively putting effort to find the new medicines and vaccines which might be able to fight against viral infection.

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INTRODUCTIONS:

Among all the viruses, the coronavirus causes diseases in mammals and birds. As like common typical respiratory tract infections, in humans, coronaviruses cause the common cold, just similar forms such as SARS, MERS and COVID-19 can be lethal. Symptoms are different in other species like chickens, they cause an upper respiratory tract disease, while in cows and pigs they cause diarrhea. There are no vaccines or antiviral drugs to treat human corona virus infections [1].

Feline coronavirs:

Feline coronavirus (FCoV) is a positive-stranded RNA virus that is infectious to cats worldwide. This virus is part of the species Alphacoronavirus 1 of the genus

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Alphacoronavirus belonging to the virus family *Coronaviridae* [2].

Structure of Virus:

Spherical or pleomorphic enveloped particles containing single-stranded (positive-sense) RNA associated with a nucleoprotein within a capsid comprised of matrix protein. The envelope bears club-shaped glycoprotein projections [3].

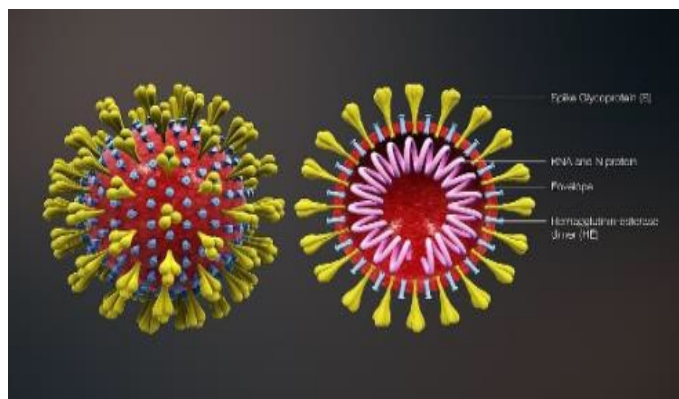


Fig 1. The structure of corona virus.

Wuhan Novel Coronavirus (2019-nCoV) Incubation Period:

The incubation period (time from exposure to the development of symptoms) of the virus is estimated to be between 2 and 14 days based on the following sources: The World Health Organization (WHO) reported an incubation period for 2019-nCoV between 2 and 10 days [4]. China’s National Health Commission (NHC) had initially estimated an incubation period from 10 to 14 days [5]. The United States’ CDC estimates the incubation period for 2019-nCoV to be between 2 and 14 days.

Symptoms of Virus:

The symptoms of virus infections are runny nose, sore throat, cough, fever and difficulty breathing (severe cases) [3].

Mode of Transmission:

Viral infection transmits from person to person. Between people who are in close contact with one another (within about 6 feet). Via respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs [6].

Prevention:

There is currently no vaccine to prevent coronavirus disease 2019 (COVID-19). The best way to prevent illness is to avoid being exposed to this virus.

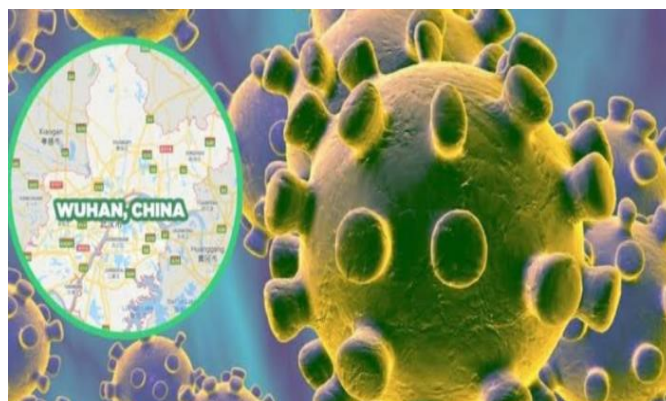


Fig 2. Wuhan Novel Coronavirus.



Fig 3. The Corona virus infection case statistics.

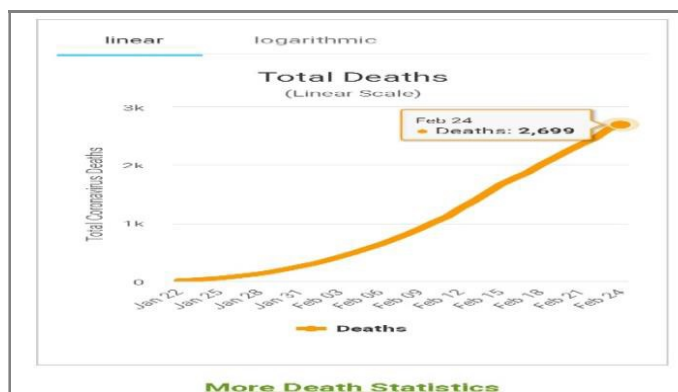


Fig 4. The Corona virus infection death statistics.

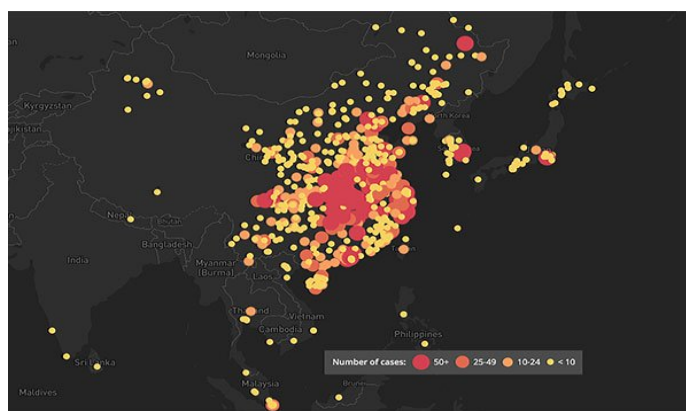


Fig 5. Health maps of coronavirus.

However, as a reminder, CDC always recommends everyday preventive actions to help prevent the spread of respiratory diseases [7,8], including:

- Avoid close contact with people who are sick.
- Avoid touching your eyes, nose, and mouth.
- Stay home when you are sick.
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
- Clean and disinfect frequently touched objects and surfaces using a regular household cleaning spray or wipe.
- Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60 % alcohol.
- Always wash hands with soap and water if hands are visibly dirty.
- Avoid the eating of non-veg.
- Any eating things boil 100°C.

Treatment:

There is no specific antiviral treatment recommended for COVID-19. People with COVID-19 should receive supportive care to help relieve symptoms.

CONCLUSION:

Though coronavirus is a current threaten viral infection over the world wide, still it can be overcome by adopting preventive measures. All the research scientist should do research unitedly to find the antiviral drug and vaccines to protect the human world.

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REFERENCES:

1. Chan JF-W, Yuan S, Kok K-H, *et al.* A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *Lancet*, 2020 January 24 (Epub ahead of print).
2. Chen N, Zhou M, Dong X Jr, *et al.* Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet*, 2020 January 30 (Epub ahead of print).

3. Washington State Department of Health. Novel coronavirus outbreak 2020.
4. Zhu N, Zhang D, Wang W, *et al.* A novel coronavirus from patients with pneumonia in China, 2019. *N Engl J Med*, DOI: 10.1056/NEJMoa2001017.
5. Centers for Disease Control and Prevention. Information for laboratories. Wuhan, China: 2019 novel coronavirus; 2020
6. Sheahan TP, Sims AC, Leist SR, *et al.* Comparative therapeutic efficacy of Remdesivir and combination Lopinavir, Ritonavir, and interferon beta against MERS-CoV. *Nat Commun*, 2020; 11: 220-222.
7. Mulangu S, Dodd LE, Davey RT, *et al.* A randomized, controlled trial of Ebola virus disease therapeutics. *N Engl J Med*, 2019; 381: 2293-2303.
8. Phan LT, Nguyen TV, Luong QC, *et al.* Importation and human-to-human transmission of a novel coronavirus in Vietnam. *N Engl J Med*. DOI: 10.1056/NEJMc2001272.

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